

REMARKS

In the Office Action, the Examiner rejected claims 1-55. Applicants respectfully request reconsideration of the present application in view of the remarks set forth below.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-10, 12-21, 23-31, 35-41, 43-50, and 52-55 under 35 U.S.C. § 103 as being unpatentable over Vivio (U.S. Pat. No. 5,706,447, hereafter “the Vivio reference”) in view of Alexander (U.S. Pat. No. 6,701,402, hereafter “the Alexander reference”); rejected claims 11, 22, and 34 under 35 U.S.C. § 103(a) as being unpatentable over the Vivio reference in view of the Alexander reference and further in view of Applicant Admitted Prior Art; and rejected claims 32-34, 42, and 51 under 35 U.S.C. § 103(a) as being unpatentable over the Vivio reference in view of the Alexander reference and further in view of Gasparik et al. (U.S. Pat. No. 6,072,943, hereafter “the Gasparik reference”). Applicants respectfully traverse these rejections for at least the reasons discussed in further detail below.

More specifically, with regard to independent claims 1 and 13, the Examiner stated:

Vivio discloses a method of switching control of a bus in a processor-based device, the method comprising the acts of:

- Electrically coupling a first bus controller to the bus (col. 4., lines 18-36)
- Generating a detection signal indicative of coupling of a second bus controller to the bus; and (col. 4, lines 18-12)

Vivo [sic] discloses all the limitations as above except automatically isolating the first bus controller from the bus in response to the detection signal. However, Alexander discloses when controller is given master access to bus, controller is only master communicating with disk controller, other masters connected to bus are not communicate with disk controller until controller relinquishes master access to bus (col. 3, lines 7-13).

Office Action, page 2.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a *convincing line of reasoning* as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). In addition, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984); *see* M.P.E.P. §2143.01.

Deficiencies of the Rejection

Applicants respectfully submit that the Examiner does not fully appreciate certain features recited in the present claims. The present application is directed to a system and method of automatically switching control of a bus in a processor-based device. Pg. 2, lines 7-8. While certain system motherboards may include a controller for controlling devices on a bus, such as a SCSI controller for controlling SCSI devices, many end-users may desire incorporation of alternate controller cards which provide different or additional features.

Features of independent claims 1, 21, 23, 35, 44, 52, and 53 missing from the cited references

Independent claims 1, 21, 23, 35, 44, 52, and 53 of the present application recite a method or device for automatically isolating a first bus controller from the bus in response to a second bus controller being coupled to the bus (or in response to the generation of a detection signal indicating that a second controller has been coupled to the bus). Based on the similarity of the Examiner's rejections with respect to each of the independent claims, these points will be discussed together. While the specific recitations may vary with regard to one or more specific independent claims, the discussion below may be applicable to each of the independent claims.

As the Examiner acknowledged in the most recent Office Action, the Vivio reference clearly does not disclose isolating a first bus controller from the bus, as recited in the pending claims. *See* Office Action, page 2. Rather, the Vivio reference is directed towards a system that facilitates the addition or removal of an additional processor to a computer system. *See* Vivio, col. 8, lines 50-62; *see also*, Fig. 5. This second processor is *intended to work in conjunction* with the first processor and *not* to take control of the bus 120.

Contrary to the Examiner's assertion, however, the Alexander reference does not cure this deficiency in the Vivio reference. The Alexander reference discloses a system for selectively operating a host device controller in a first mode or a second mode. *See* Abstract. More specifically, the Alexander reference discloses a PLD 120 that is configured to detect when a controller 107 is given master access to a PCI bus 115 and to disconnect ID select line ("IDSEL") 135 from the PCI bus 115 in response to this detection. *See* Alexander, col. 3, lines 6-52. When IDSEL 135 is disconnected from the PCI bus 115, the disk controller 110

becomes “invisible” to any other PCI devices that may become masters of the PCI bus 115.

See id. The disk controller 110, however, remains in contact with the controller 107 over the PCI bus.

In sharp contrast to the above-recited claims, the Alexander reference does not disclose *isolating a bus controller* from the bus, as recited in claims 1, 21, 23, 35, 44, 52, and 53. First, neither the IDSEL 135 nor the disk controller 110 is bus controller, as neither component is ever disclosed to be a master for the PCI bus 115. *See* Alexander, col. 3, lines 38-51. Second, the controller 107, which could act as a PCI master, is never isolated from the PCI bus 115. *See* Alexander, col. 3, lines 49-51 (stating “[a]ccordingly, other masters are prevented from communicating with disk controller 110 and controller 107 maintains sole access with disk controller 110”). As such, Applicants respectfully assert that the Alexander reference does not cure the admitted deficiencies of the Vivio reference, because the Alexander reference clearly does not disclose *isolating a bus controller*. For at least this reason, Applicants respectfully assert that the claims 1, 21, 23, 35, 44, 52, and 53, as well as the claims that depend therefrom, are patentable over the cited references taken alone or in combination.

Features of independent claim 13 missing from the cited references

Applicants also respectfully assert that the cited references, taken alone or in combination, do not disclose several features of independent claim 13. For example, independent claim 13 recites “automatically switching control of the bus from the first bus controller to the second bus controller *in response to detecting the presence of the second bus controller.*” (Emphasis added). The Examiner conceded in the Office Action that the Vivio reference does not disclose this feature and relied on the Alexander reference to disclose this

feature. *See* Office Action, page 2. Applicants respectfully assert, however, that the Alexander reference does not cure this deficiency in the Vivio reference. As discussed above, the Alexander reference is directed to a system for switching a disk controller 110 into a second mode where it only communicates with the controller 107. *See* Alexander, col. 3, lines 38-52. There is no discussion in the Alexander reference of detecting the presence of a second bus controller, much less of switching control of the PCI bus 115 *in response to* detecting the presence of the second bus controller, as recited in claim 13. For at least this reason, Applicants respectfully assert that claim 13 and the claims that depend therefrom are patentable in view of the cited references taken alone or in combination.

The proposed modification would make the Vivio reference unsuitable for its intended purpose

Applicants also respectfully assert that it is improper to modify the Vivio reference in view of the Alexander reference, because the very idea of switching control from one bus to another is antithetical to the intended purpose of the Vivio reference. As the Examiner is aware from M.P.E.P. 2143.01, there can be no motivation to modify a reference if the proposed modification would make the prior art invention unsatisfactory for its intended purpose. *See also, In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed.Cir. 1984).

As described above, the Vivio reference is directed towards a system that facilitates the addition of a second processor to a computer system. *See* Vivio, col. 8, lines 50-62; *see also*, Fig. 5. This second processor is *intended to work in conjunction* with the first processor and *not* to take control of the bus 120. *See id.* The Examiner proposes to modify the Vivio reference such that the insertion of the processor 128

disconnects the processor 122 from the PCI bus 120. This modification, however, would defeat the entire purpose of the system disclosed in the Vivio reference - leveraging the computing power of *dual processors*. See Vivio, abstract. As such, any attempt to modify the Vivio reference to support switching control of PCI bus 120 and/or isolating the processor 122 would make the system disclosed in the Vivio reference unsatisfactory for its intended purpose.

In view of the remarks set forth above, Applicants respectfully submit that none of the cited references alone or in combination disclose or suggest the elements set forth in claims 1, 13, 21, 23, 35, 44, 52, or 53 much less provide any suggestion to combine the disparate teachings to render the claimed subject matter obvious. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 1, 13, 21, 23, 35, 44, 52, and 53, as well as those claims dependent thereon.

Claims 31, 32, 33, 41, and 50

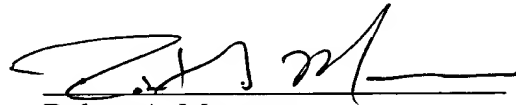
As stated above, the Examiner rejected claims 31, 32, 33, 41, and 50 as obvious of the Vivio reference in view of the Alexander reference and in further view of the Gasparik reference. Applicants respectfully submit that claims 31, 32, 33, 41, and 50 are allowable based on their dependencies on claims 23, 35, and 44, respectively, because neither the Alexander reference nor the Gasparik reference cure the deficiencies described above with regard to the Vivio reference. For at least this reason, claims 31, 32, 33, 41, and 50 are believed to be allowable over the cited references taken alone or in conjunction with each other. Thus, Applicants respectfully request withdrawal of the rejection of claims 31, 32, 33, 41, and 50.

Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of claims 1-55. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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